ABSTRACT AND BIOGRAPHY

Broad-Based Teams, Case Study 2 – Max Launch Abort System

At the request of the former Associate Administrator for Exploration Systems Mission Directorate, the NASA Engineering and Safety Center (NESC) is developing an alternate concept launch abort system (LAS) for the Constellation Program's (CxP) Orion crew module. The concept is called the Max Launch Abort System (MLAS), named in honor of Maxime Faget. The MLAS design focuses on eliminating or mitigating the need for complex controls thereby making both development and operation less risky. MLAS will provide CxP decision makers with a viable alternative to the current LAS design.

The design and manufacture of MLAS has been an excellent example of integration and coordination between civil service and contractors from Virginia to California. The project is managed by the NESC at the Langley Research Center with team members from all NASA Centers and several contractors. MLAS is a fast-paced project that is utilizing off-the-shelf equipment to the extent practical. Based upon specific areas of expertise, partnerships with various Centers and contractors have been established – for example, the GSFC's Wallops Flight Facility sounding rocket experience and Northrop Grumman composite materials experience.

The benefits of MLAS go beyond an alternative system and include the opportunity to grow young NASA engineers by involving them in the design and manufacture of a new system. The knowledge and experience the engineers gain will serve to benefit the Agency in the years to come. NASA veterans from the Apollo and Space Shuttle Programs are also engaged to help apply the lessons learned from past programs.

Dawn M. Schaible
Manager, Systems Engineering Office
NASA Langley Research Center

Ms. Schaible is currently the Manager of the Systems Engineering Office for the NASA Engineering and Safety Center (NESC). She is also serving as the Systems Engineering and Integration Lead for the Max Launch Abort System.

Ms. Schaible began her career with NASA at the Kennedy Space Center (KSC) in 1987, where she served as a Space Shuttle Orbiter Environmental Control and Life Support Systems (ECLSS) Engineer. In this role, she led the ECLSS ground processing activities for the Orbiter Endeavour. In 1996, Ms. Schaible joined the International Space Station (ISS) Hardware Integration Office, where she served as the Lead Test Engineer for the "Unity" Node and U.S. Laboratory "Destiny" modules. In 2000, Ms. Schaible was selected to serve as Chief, Integration Branch for the ISS/Payload Processing Directorate.

Ms. Schaible completed the Systems Design and Management Program at the Massachusetts Institute of Technology, where she received a M.S. degree in

Engineering and Management. Ms. Schaible previously earned a B.S. degree in Mechanical Engineering from Bradley University and a M.S. degree in Space Systems Operations from the Florida Institute of Technology.